COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION
P.O. BOX 3265, HARRISBURG, PA 17105-3265

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July 15, 1997

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EX PARTE OR LATE FILED

Mr. William F. Caton
Acting Secretary
1919 M Street, NW, Room 222
Federal Communications Commission
Washington, DC 20554

Re: Ex Parte-Meeting on Universal Service, CC Docket No. 96-45

Dear Mr. Caton:

Enclosed please find an original and two copies of each of the following documents that is being filed as an ex parte submission:

> Interim Report Concerning the Definition of Rural Areas, Prepared by the Subcommittees on Rural Health Care and Schools and Libraries, Pennsylvania Universal Telephone Service Task Force;
>
> List of Representative Organizations participating in the PA Universal Telephone Service Task Force;
>
> A set of workpaper summaries of the calculations set forth in the Interim Report.

Individuals representing the Task Force in attendance at meetings with FCC Commissioners and Staff during which this information was discussed today include: Commissioner David Rolka, Joseph Dudick, Pennsylvania Rural Development Council; Nicholas Giordano and Valerie Long, Pennsylvania Office of Administration-Office of Information Technology; Julie Tritt, Pennsylvania School Boards Association. If you have any questions, please contact me at (717) 787-8763.

Sincerely,

Debra M. Kriete

Debra M. Kriete
Legal Counsel to
Commissioner David W. Rolka

cc: International Transcription Service

Members of Pennsylvania Universal Telephone Service Task Force

360 Communications
ALLTEL
AT&T
ATX
Bell Atlantic
Bell-Atlantic Network Services
Carbon Lehigh Intermediate Unit 21
Central Atlantic Pay Phone Assoc.
Comcast Cellular
Dauphin County Libraries System
Department of Education
GTE
Health Sciences Library Consortium
Lackawaxen Telephone Co.
MCI
Nextlink
Office of Small Business Advocate
Office of Consumer Advocate
PA Department of Health
PA Telephone Association
PA Rural Development Council
PA Office for Information Technology
PA Cable & Telecommunications Association
PA Library Association
PA Public Utility Commission
PA School Boards Association
Pennsylvania Utility Law Project
Rural Utility Service
Sprint/United Telephone
Vanguard Cellular System, Inc.
Worldcom, Inc.

Interim Report Concerning The Definition of Rural Areas
Prepared by the Subcommittees on Rural Health Care and Schools and Libraries
Pennsylvania Universal Telephone Service Task Force
Adopted July 14, 1997

Introduction and Background

In order to implement universal telephone service for health care providers, the Federal Communications Commission ("FCC") adopted a $400 million program comprised of three components: (1) all public and non-profit health care providers that are located in rural areas and meet the statutory eligibility criteria may obtain universal service support for telecommunications services up to and including a bandwidth of 1.544 Mbps by obtaining a price for service that is comparable to the price charged to urban health care providers; (2) rural health care providers may obtain a reduction to the distance charges incurred, compared to the distance charges incurred by urban health care providers; and (3) all health care providers--both urban and rural--may obtain support for toll-free access to an Internet service provider.

The principal aim of the federal program is focused on health care providers located in rural areas. The FCC adopted a definition of rural area to mean a nonmetropolitan county or county equivalent, as defined by OMB and identifiable from the most recent Metropolitan Statistical Area ("MSA") released by OMB or any census tract or block numbered area, or contiguous group of such tracts or areas, within an MSA-listed metropolitan county identified in the most recent Goldsmith Modification published by the Office of Rural Health Policy/Health and Human Services ("ORHP/HHS"). There are two main methods of defining rural and urban areas, according to the FCC: the Bureau of Census designation of rural and urban areas based on density, and metropolitan and nonmetropolitan areas based on the integration of counties with big cities. The FCC accepted the ORHP/HHS methodology because counties are units of identification more easily used and administered than the Bureau of the Census' density-based definition of rural and urban areas. The Goldsmith Modification identifies small town and open-country parts of large metropolitan counties by census tract or block-numbered area, as defined by the Bureau of the Census.

Pennsylvania is home to 3.7 million residents that live in rural areas according to the definition of rural used by the Bureau of the Census--the most in the nation. Although typically not thought as a state with a large rural constituency, the statistics reveal just the opposite. Consequently, the definition of rural area is of great importance to our state, so that we can be assured that the benefits of the universal service programs are made available to as many rural entities as possible. It should be noted that the FCC adopted the same definition of rural areas for purposes of administering the schools and libraries discount program. Thus, this issue relates to both the rural health care program and the schools and libraries program.

Under the FCC's approach, metropolitan counties are considered urban and non-metropolitan counties are considered rural. The Census Bureau defines a metropolitan area as one or more contiguous counties surrounding a central city of 50,000 or more. Outlying, contiguous counties are included in a metropolitan area based on their population density, growth rate, commuting patterns, and other factors. All counties not identified as part of a metropolitan area are considered non-metropolitan.

The Subcommittee on Rural Health Care was assigned the responsibility of analyzing the FCC's definition of rural areas to determine whether the definition was consistent with the Commonwealth's needs and objectives. The advice of numerous experts on rural issues was solicited: the Pennsylvania Rural Development Council (a sitting member on the PUC's Task Force); the Center for Rural Pennsylvania; the Pennsylvania Office of Rural Health; the Commonwealth's Department of Health, the Hospital and Health Systems of Pennsylvania; the American Association of Retired Persons. These rural specialists comprehensively analyzed the FCC's definition and concluded that it did not meet its intended objectives. An alternative method of classifying rural areas is proposed in order to assure that all of Pennsylvania's rural health care facilities may be eligible to benefit from the federal universal service program.

Application of the FCC's definition to Pennsylvania's 67 counties results in the exclusion of nine counties which are typically considered to be rural. This Interim Report sets forth a comprehensive explanation of the Task Force's concern that the FCC's definition of rural areas is too narrow to adequately meets our state's concerns. Accordingly, the Task Force recommends that the PUC petition the FCC for waiver or reconsideration of its rural definition so as to classify the nine affected counties as rural. This relief would apply not only for purposes of the rural health care program; also it would apply to the schools and libraries discount program.

It should be noted that these rural specialists considered several other logical and defensible methods for defining rural areas, all of which classified more than nine additional counties as rural. Instead, the group analyzing this issue chose to focus on the nine counties which are the most demonstrably rural in character.

Which nine counties are at issue?

Under the FCC's definition, 31 counties are classified as metropolitan, and therefore, urban; and the remaining 36 counties are classified as non-metropolitan, and therefore, rural. Under the alternative method suggested for Pennsylvania, there would be an additional nine counties classified as non-urbanized, and therefore, rural.

The nine counties at issue are: (1) Butler; (2) Carbon; (3) Columbia; (4) Fayette; (5) Lebanon; (6) Perry; (7) Pike; (8) Somerset; and (9) Wyoming. Each of these counties is classified as urban areas under the FCC's definition. Yet, according to the rural experts' consensus opinion, these nine counties share more in common with their non-metropolitan counterparts than with the other metropolitan counties, and have a rural rather than urban character.

Rationale for Classifying the Additional Nine Counties as Rural

In Pennsylvania, several of the counties which are classified as metropolitan share more in common with their non-metropolitan counterparts than with the other metropolitan counties. That is, many of Pennsylvania's metropolitan counties have a rural rather than an urban character. This is true not

only of the distribution of health care providers and the telecommunications infrastructure within these counties but of their general culture and population composition.

The nine counties when compared to the other 24 metropolitan counties classified as urban under the FCC's definition have, for example:

- A significantly lower primary care physician to population ratio;
- A significantly higher proportion of residents living within designated areas of medical underservice;
- Significantly fewer hospitals and hospital beds;
- A significantly lower health care provider to population ratio for all types of providers;
- A significantly lower per capita income;
- A significantly higher population growth rate;
- Lower per capita federal transfer payments.

In determining to use the metro/non-metro MSA classification system for differentiating between urban and rural areas, the FCC relied on the Joint Board's recommendation regarding this subject. The Joint Board expressly acknowledged that the comments of the Office of Rural Health Policy/Health and Human Services which stated that no method for defining "rural" is perfect; each method has deficiencies or problems. The Goldsmith modification was accepted by the Joint Board (and later by the FCC) as the means for classifying as rural large, nominally metropolitan counties *particularly in western states* which contain significant rural areas that are isolated and lack easy physical access to the central areas of metropolitan counties for health care services. The Goldsmith modification, however, only classifies a portion of one additional county in our state--Lycoming County-- as rural when it would otherwise be classified as urban. The Joint Board's rationale for accepting the metro/non-metro MSA approach with the Goldsmith Modification is instructive in setting forth inherent limitations on the accuracy of this methodology:

> For the task of determining the size and boundaries of the rural areas in a state, we believe it is appropriate to use a method that seeks to include as many of the truly rural areas as possible. We agree with OHRP/HHS that no currently-used method of designating rural areas is perfect. We conclude, however, that the OMB MSA method is, by itself, under-inclusive of many rural areas and therefore does not meet the standards set by the Commission in the NPRM. The Goldsmith Modification, by identifying by census tract or block more densely-populated areas in large, otherwise rural counties *somewhat ameliorates* this problem. This method meets the "ease of administration" criterion as well. Lists of MSA counties and Goldsmith-identified census blocks and tracts already exist, updated to 1995. Through the use of these lists, any health care provider can easily determine if it is located in a rural area and therefore whether it meets that test of eligibility for support.

Universal Service Joint Board Recommended Decision, ¶694 (November 9, 1996) (emphasis added). The FCC accepted this recommendation of the Joint Board. *Universal Service Report and Order, ¶649.*

It is clear the MSA metro/non-metro classification with the Goldsmith Modification does not sufficiently ameliorate the concern of accurate classification of rural counties for our state.

The additional analysis which led the Pennsylvania rural specialists to identify these nine additional counties as rural was based on a statistical review of the counties as well as an examination of what characteristics appropriately measure urban and rural areas. The recommendation is to consider urbanization as the primary means of defining urban areas:

> *A county is considered urban if 50 percent or more of its population resides within an urbanized area. In addition, any central county of a metropolitan area is also considered urban. All counties not defined as urban by this definition are considered rural.*

The Census Bureau defines an urbanized area as the central city of a metropolitan area and all contiguous areas which have a population density of 1,000 more persons per square mile or are highly connected to the area by vehicular roads. In a few instances, the central county (the county in which the metropolitan city is located) is less than 50 percent urbanized. In these counties the strong urban and local presence of the metropolitan center results in a county with an urban rather than a rural character. The concept of "urbanized" is more highly consistent with urban culture and more closely corresponds to the service infrastructure which characterizes urban areas.

These nine additional counties should be classified as rural, either on the basis of a waiver of the FCC's definition to allow for this outcome, or alternatively via the FCC's reconsideration of the measure of rural/urban to encompass the additional urbanization criterion set forth above. Because we are not familiar with the circumstances of other states, we do *not* advocate that the rural/urban definition be modified for purposes of the entire federal program. If, however, the FCC believes such an approach is preferable to a waiver, we would have no objection to such an outcome.

What is the fiscal impact on the Federal Health Care Program of including the nine additional counties within the definition of rural?

For the rural health care program, the fiscal impact is estimated to be less than 2/10 of 1% of the overall cost of $400 million for the federal program. A "priceout" of this recommendation was undertaken to determine whether it was financially feasible. Recognizing that concerns over fiscal management led the FCC to impose a $400 million cap on the rural health care program, the Task Force was very concerned that endorsement of this recommendation could not be even considered unless a "fiscal impact" analysis was conducted and presented to the FCC. The Task Force is confident that its recommendation can easily be accommodated within the existing parameters of the $400 million cap.

The Subcommittee on Rural Health Care identified the components of the federal program which would be financially impacted by this recommendation: the rate averaging provision which provides for rural health care providers to receive a rate that is comparable in price, including an allotment of mileage charges, to the price charged to urban health care providers for commercially available telecommunications service up to a 1.544 Mbps (T-1) capacity. Note that the toll free Internet access provision has no financial implications for this proposal since all eligible health care providers, both urban and rural, are able to receive such benefit.

The following methodology was employed to calculate the fiscal impact of this proposal.

1. All eligible health care providers in the nine counties were identified from various public sources:
   - o Rural health clinics, community health centers, and migrant health centers were obtained from *Community Health Centers and Other Federally Affiliated Clinical Sites in Pennsylvania*, Schwartz, Mike (April, 1997). University Park; Pennsylvania Office of Rural Health. The source list includes all grantees under the PHS Act, members of the Pennsylvania Forum for Primary Care and all Medicare certified providers.
   - o Non-profit hospitals were obtained from the Pennsylvania Department of Health. Note that there are no county or municipal health departments in these counties.
   - o Post-secondary educational institutions were obtained from an Internet search. A listing of all 2 and 4 year colleges was located; institutions in the nine counties were identified and a web site for each institution was identified. The web site was scanned for a listing of programs offered. Each institution which offered a health care provider program was included in the list (these include nursing, nurse practitioners, others).
   - o This data was configured for use by a geocoding program.
   - o A total of 46 providers for all nine counties were identified.

2. All locations within the state with populations of 50,000 or more were identified: Pittsburgh city; Penn Hills Township; Reading city; Altoona city; Bristol Township; Bensalem Township; Harrisburg city; Upper Darby Township; Erie city; Scranton city; Lancaster city; Allentown city; Lower Merion Township; Abington Township; Bethlehem city; Philadelphia city.

3. GIS Methods
   - o Addresses from the above data file identified under step no. 1 above were geocoded using the *Streetbase* geocoder. This geocoder operates within an ATLAS GIS shell. The status of the address matching resulting from the geocoding is archived in the variable "code" in the final database. A "1" indicates a ZIP Code only match, other codes indicate various levels of address matching. Latitude and longitude coordinates were stored in the database for each eligible provider.
   - o The points were then mapped using ATLAS GIS and an algorithm constructed to calculate the distance to the closest population center with 50,000 or more residents. These distances measured the distance from the health care provider to the centroid of each of the population centers of 50,000 or more.
   - o The calculation of the minimum distances was computed.

4. The maximum diameter of each of the locations with populations of 50,000 or more was computed by the Pennsylvania Department of Transportation, Cartographic Information Division, using Integraph Microstation Design files; and digitizing boundary lines from existing general highway series maps (approximate scale: 1 inch = 1 mile).

5. For each of the 46 eligible health care providers identified in step no. 1 above, the incumbent local exchange telecommunications company (ILEC) was identified, and the ILEC was identified for each location with a population of 50,000 or more.

6. A. The maximum distance between the health care provider and the farthest point on the boundary of the closest location with 50,000 people was computed. Because the distance in step no. 3 computed the distance between the health care provider's location and the centroid of the location with 50,000 people, the radius of the maximum diameter of each location with 50,000 persons or more was added to the distance in step no. 3 to arrive at the maximum distance.

   B. The maximum diameter of each location with 50,000 persons or more was deducted from the maximum distance between the health care provider and farthest point on the boundary of the closest location with a population of 50,000 person or more, to arrive at the distance which would be subsidized from the federal universal service program via the mileage charge provision.

7. The T-1 rates for each ILEC was compared to the T-1 rates applicable to the locations with populations of 50,000 or more, and all differences were identified and quantified. For example, the local channel charge for T-1 is higher in rural areas than in urban areas.

8. The T-1 rates were then computed for each eligible health care provider based on the above steps.

The total additional cost for including the eligible health care providers of the nine additional counties within the rural definition is $475,087, or less than 2/10 of 1% of the $400 million cap for the program. We believe that this recommendation, therefore, can be accommodated within the existing program and will not necessitate any additional financial resources to be committed by the FCC. We clarify that it is imperative for the FCC to resolve this concern because the nationwide rural health care program is being funded from assessments on both interstate and intrastate revenues of providers of interstate telecommunications services. Consequently, it is critical that the rural health care providers located in these nine counties be placed on the same footing as the rural health care providers located in the counties that already are classified as rural.

What is the fiscal impact on the Schools and Libraries Discount Program of including the nine additional counties within the definition of rural?

The Subcommittee on Schools and Libraries submits the following assessment:

By reclassifying these counties, there assuredly will be a financial impact to the annual Universal Service Fund of $2.25 billion. In order to estimate this cost of the alternative definition, the following rationale was used:

Schools:
The FCC Order estimates that schools will spend $3.0 billion annually to purchase the technology services eligible for discounts. The weighted national average of discounts is 60%, thus discounts on those services will cost $1.8 billion. If $1.8 billion is divided by the total number of schools, 113,000, the approx. discount for each school is $15,929. Because we know that the most a school's discount can increase by reclassifying its county is 10%, we can then determine that $1,592.92 is the average amount that each of those districts will benefit under the new definition. We then multiply $1,592.92 by the number of schools in those nine counties (317) to calculate the approx. cost = **$504,955.**

Libraries:
The calculation is the same, assuming that $180 million is the estimated amount that libraries will spend annually to purchase technology services eligible for discounts. The weighted national average of discounts is 60%, thus discounts on those services will cost $108 million. If $108 million is divided by the total number of libraries, 15,000, the approximate discount for each library is $7,200. Because we know that the most a library's discount can increase by reclassifying its county is 10%, we can then determine that $720 is the average amount that each of those libraries will benefit under the new definition. We then multiply $720 by the number of libraries in those nine counties (55) to calculate the approx. cost = **$39,600.**

Therefore the approximate impact of the alternative definition of rural is $544,555, which has a relatively smaller impact on the E-Rate schools and libraries discount program than the impact felt on the health care fund. The fiscal impact is less than 3/100 of 1% of the $2.25 billion E-Rate program.

Because these calculations were done using a weighted average, the cost is only a good estimate. These calculations are likely to be higher than the actual cost impact on the program because the methodology assumes that all schools and libraries will receive a 10% increase in discounts. However, we know that schools and libraries that fall within the two most economically disadvantaged categories will not receive an increase in discount, since there is no difference between the rural and urban discount for those two levels. A more detailed analysis of the financial impact is being prepared by the Center for Rural PA and should be available by the end of the week. If available, the report will be issued at the July 14 Universal Service Task Force meeting.

Task Force Recommendation
The Universal Telephone Service Task Force recommends that the Pennsylvania PUC submit a petition for waiver, or in the alternative, reconsideration of the rural definition to permit the additional nine counties to be classified as rural. The Task Force recommends that this Report be attached to the Petition submitted to the FCC, and that the Petition be filed by no later than July 17, 1997. This Task Force did not examine the desirability or need for intrastate support for this or similar programs. No party to the Task Force waives its right to develop and support its own position if the Pennsylvania PUC determines that it wishes to examine this issue in the future.

Health Care Facilites	NAME	LOCATION	TELCO	ZIP	TYPE	Miles to Center	Radius	Max. Ckt. Miles	MINCITY	MINCITY Density Cell	Rural Ckt Monthly Cost	Rural Ckt Annual Cost	Urban Ckt Monthly Cost	Urban Ckt Annual Cost	US Fund Subsidy Annualized
1	State Health-Carbon	Jim Thorpe	Bell-Atl	18229	State Health	23.49	3.65	28	Allentown	cell3	$ 1,315.00	$ 15,780.00	$ 780.00	$ 9,360.00	$ 6,420.00
2	GOOD SAMARITAN HOSPITAL - LEBANON	LEBANON	Bell-Atl	17042	Hospital	21.38	2.83	25	Lancaster	cell3	$ 1,240.00	$ 14,880.00	$ 780.00	$ 9,360.00	$ 5,520.00
3	VA MEDICAL CENTER - LEBANON	LEBANON	Bell-Atl	17042	Hospital	19.54	2.83	23	Lancaster	cell3	$ 1,190.00	$ 14,280.00	$ 780.00	$ 9,360.00	$ 4,920.00
4	State Health-Lebanon	Lebanon	Bell-Atl	17046	State Health	21.73	2.83	25	Lancaster	cell3	$ 1,240.00	$ 14,880.00	$ 780.00	$ 9,360.00	$ 5,520.00
5	PHILHAVEN	MT GRETNA	Bell-Atl	17064	Hospital	16.60	2.83	20	Lancaster	cell3	$ 1,115.00	$ 13,380.00	$ 780.00	$ 9,360.00	$ 4,020.00
6	Family Health Center	Brownsville	Bell-Atl	15417	Clinic	31.80	6.38	39	Pittsburgh	cell1	$ 1,590.00	$ 19,080.00	$ 720.00	$ 8,640.00	$ 10,440.00
7	BROWNSVILLE GENERAL HOSPITAL	BROWNSVILLE	Bell-Atl	15417	Hospital	31.93	6.38	39	Pittsburgh	cell1	$ 1,590.00	$ 19,080.00	$ 720.00	$ 8,640.00	$ 10,440.00
8	Centerville Clinics-Fairchance Office	Fairchance	Bell-Atl	15436	Clinic	44.54	6.38	51	Pittsburgh	cell1	$ 1,890.00	$ 22,680.00	$ 720.00	$ 8,640.00	$ 14,040.00
9	GNADEN HUETTEN MEMORIAL HOSPITAL	LEHIGHTON	Bell-Atl	18235	Hospital	20.93	6.38	28	Pittsburgh	cell1	$ 1,315.00	$ 15,780.00	$ 720.00	$ 8,640.00	$ 7,140.00
10	Centerville Clinics-Republic Office	Republic	Bell-Atl	15475	Clinic	33.55	6.38	40	Pittsburgh	cell1	$ 1,615.00	$ 19,380.00	$ 720.00	$ 8,640.00	$ 10,740.00
11	Family Health Center	Smithfield	Bell-Atl	15478	Clinic	45.44	6.38	52	Pittsburgh	cell1	$ 1,915.00	$ 22,980.00	$ 720.00	$ 8,640.00	$ 14,340.00
12	Family Health Center	Uniontown	Bell-Atl	15401	Clinic	39.78	6.38	47	Pittsburgh	cell1	$ 1,790.00	$ 21,480.00	$ 720.00	$ 8,640.00	$ 12,840.00
13	UNIONTOWN HOSPITAL	UNIONTOWN	Bell-Atl	15401	Hospital	40.42	6.38	47	Pittsburgh	cell1	$ 1,790.00	$ 21,480.00	$ 720.00	$ 8,640.00	$ 12,840.00
14	State Health-Fayette	Uniontown	Bell-Atl	15401	State Health	39.03	6.38	46	Pittsburgh	cell1	$ 1,765.00	$ 21,180.00	$ 720.00	$ 8,640.00	$ 12,540.00
15	PSU-Fayette Campus	Uniontown	Bell-Atl	15401	Post Sec	40.74	6.38	48	Pittsburgh	cell1	$ 1,815.00	$ 21,780.00	$ 720.00	$ 8,640.00	$ 13,140.00
16	Ali A Alley, MD, PC	Berwick	Bell-Atl	18603	Clinic	38.04	4.78	43	Scranton	cell3	$ 1,690.00	$ 20,280.00	$ 780.00	$ 9,360.00	$ 10,920.00
17	BERWICK HOSPITAL CENTER	BERWICK	Bell-Atl	18603	Hospital	37.47	4.78	43	Scranton	cell3	$ 1,690.00	$ 20,280.00	$ 780.00	$ 9,360.00	$ 10,920.00
18	BLOOMSBURG HOSPITAL	BLOOMSBURG	Bell-Atl	17815	Hospital	49.40	4.78	55	Scranton	cell3	$ 1,990.00	$ 23,880.00	$ 780.00	$ 9,360.00	$ 14,520.00
19	State Health-Columbia	Bloomsburg	Bell-Atl	17815	State Health	48.77	4.78	54	Scranton	cell3	$ 1,965.00	$ 23,580.00	$ 780.00	$ 9,360.00	$ 14,220.00
20	Bloomsburg University of PA	Bloomsburg	Bell-Atl	17815	Post Sec	49.41	4.78	55	Scranton	cell3	$ 1,990.00	$ 23,880.00	$ 780.00	$ 9,360.00	$ 14,520.00
21	Exeter Township Health Center	Falls	C-Tec	18615	Clinic	10.92	4.78	16	Scranton	cell3	$ 1,015.00	$ 12,180.00	$ 780.00	$ 9,360.00	$ 2,820.00
22	Monroe-Noxen Health Center	Noxen	C-Tec	18636	Clinic	19.87	4.78	25	Scranton	cell3	$ 1,240.00	$ 14,880.00	$ 780.00	$ 9,360.00	$ 5,520.00
23	Noxen Center	Noxen	C-Tec	18636	Clinic	19.87	4.78	25	Scranton	cell3	$ 1,240.00	$ 14,880.00	$ 780.00	$ 9,360.00	$ 5,520.00
24	TYLER MEMORIAL HOSPITAL	TUNKHANNOCK	C-Tec	18657	Hospital	17.57	4.78	23	Scranton	cell3	$ 1,190.00	$ 14,280.00	$ 780.00	$ 9,360.00	$ 4,920.00

Health Care Facilites	NAME	LOCATION	TELCO	ZIP	TYPE	Miles to Center	Radius	Max. Ckt. Miles	MINCITY	MINCITY Density Cell	Rural Ckt Monthly Cost	Rural Ckt Annual Cost	Urban Ckt Monthly Cost	Urban Ckt Annual Cost	US Fund Subsidy Annualized
25	State Health-Wyoming	Tunkhannock	C-Tec	18657	State Health	17.57	4.78	23	Scranton	cell3	$ 1,190.00	$ 14,280.00	$ 780.00	$ 9,360.00	$ 4,920.00
26	SOMERSET STATE HOSPITAL	SOMERSET	GTE	15501	Hospital	49.03	3.65	53	Altonna	cell3	$ 2,137.81	$ 25,653.72	$ 780.00	$ 9,360.00	$ 16,293.72
27	Medical Associates of Boswell, Inc.	Boswell	GTE	15531	Clinic	40.76	3.31	45	Altoona	cell3	$ 1,827.81	$ 21,933.72	$ 780.00	$ 9,360.00	$ 12,573.72
28	MEYERSDALE COMMUNITY HOSPITAL	MEYERSDALE	GTE	15552	Hospital	59.21	3.31	63	Altoona	cell3	$ 2,525.31	$ 30,303.72	$ 780.00	$ 9,360.00	$ 20,943.72
29	SOMERSET HOSPITAL CENTER FOR HEALTH	SOMERSET	GTE	15501	Hospital	49.79	3.31	54	Altoona	cell3	$ 2,176.56	$ 26,118.72	$ 780.00	$ 9,360.00	$ 16,758.72
30	State Health-Somerset	Somerset	GTE	15501	State Health	50.00	3.31	54	Altoona	cell3	$ 2,176.56	$ 26,118.72	$ 780.00	$ 9,360.00	$ 16,758.72
31	Medical Associates of Boswell, Inc	Stoystown	GTE	15563	Clinic	40.46	3.31	44	Altoona	cell3	$ 1,789.06	$ 21,468.72	$ 780.00	$ 9,360.00	$ 12,108.72
32	Turkeyfoot Area Family Practice	Confluence	GTE	15424	Clinic	55.21	6.38	62	Pittsburgh	cell1	$ 2,486.56	$ 29,838.72	$ 720.00	$ 8,640.00	$ 21,198.72
33	Southwest Women's Healthcare, Inc	Connellsville	GTE	15425	Clinic	36.57	6.38	43	Pittsburgh	cell1	$ 1,750.31	$ 21,003.72	$ 720.00	$ 8,640.00	$ 12,363.72
34	HIGHLANDS HOSPITAL	CONNELLSVILLE	GTE	15425	Hospital	36.26	6.38	43	Pittsburgh	cell1	$ 1,750.31	$ 21,003.72	$ 720.00	$ 8,640.00	$ 12,363.72
35	State Health-Pike	Milford	GTE	18337	State Health	40.91	4.78	46	Scranton	cell3	$ 1,866.56	$ 22,398.72	$ 780.00	$ 9,360.00	$ 13,038.72
36	BUTLER MEMORIAL HOSPITAL	BUTLER	No Pittsburgh	16001	Hospital	30.09	6.38	37	Pittsburgh	cell1	$ 1,540.00	$ 18,480.00	$ 720.00	$ 8,640.00	$ 9,840.00
37	VA MEDICAL CENTER - BUTLER	BUTLER	No Pittsburgh	16001	Hospital	29.54	6.38	36	Pittsburgh	cell1	$ 1,515.00	$ 18,180.00	$ 720.00	$ 8,640.00	$ 9,540.00
38	PALMERTON HOSPITAL	PALMERTON	Palmerton	18071	Hospital	15.90	6.38	23	Pittsburgh	cell1	$ 2,115.00	$ 25,380.00	$ 720.00	$ 8,640.00	$ 16,740.00
39	WINDBER HOSPITAL	WINDBER	United	15963	Hospital	29.47	3.31	33	Altoona	cell3	$ 1,168.40	$ 14,020.80	$ 780.00	$ 9,360.00	$ 4,660.80
40	Perry Health Center	Loysville	United	17047	Clinic	28.53	3.14	32	Harrisburg	cell3	$ 1,148.60	$ 13,783.20	$ 780.00	$ 9,360.00	$ 4,423.20
41	State Health-Perry	Newport	United	17074	State Health	20.59	3.14	24	Harrisburg	cell3	$ 990.20	$ 11,882.40	$ 780.00	$ 9,360.00	$ 2,522.40
42	State Health-Butler	Butler	United	16001	State Health	25.88	6.38	33	Pittsburgh	cell1	$ 1,168.40	$ 14,020.80	$ 720.00	$ 8,640.00	$ 5,380.80
43	Butler County Community College	Butler	United	16003	Post Sec	29.60	6.38	36	Pittsburgh	cell1	$ 1,227.80	$ 14,733.60	$ 720.00	$ 8,640.00	$ 6,093.60
44	Northeast Butler Community Med Center	Petrolia	United	16050	Clinic	43.49	6.38	50	Pittsburgh	cell1	$ 1,505.00	$ 18,060.00	$ 720.00	$ 8,640.00	$ 9,420.00
45	Petroleum Valley Medical Center	Petrolia	United	16050	Clinic	43.49	6.38	50	Pittsburgh	cell1	$ 1,505.00	$ 18,060.00	$ 720.00	$ 8,640.00	$ 9,420.00
46	Slipperey Rock University of PA	Slippery Rock	United	16057	Post Sec	41.49	6.38	48	Pittsburgh	cell1	$ 1,465.40	$ 17,584.80	$ 720.00	$ 8,640.00	$ 8,944.80
	Total Costs											$ 890,527.80		$ 415,440.00	$ 475,087.80

Average Diameter for Pennsylvainia Cities Over 50,000 Population

	City	Pop. 1990	Pop. 1995 (est.)	Area Sq. Miles	Max Diameter*	Radius
	State Totals	**11,881,643**	**12,071,931**	**45,065**		
1	Abington Twp.	56,322	55,272	15.4	6.01	3.01
2	Allentown	105,090	104,791	18.3	7.29	3.65
3	Altoona	51,881	52,501	8.2	6.62	3.31
4	Bensalem Twp.	56,778	58,676	20.2	7.54	3.77
5	Bethlehem	71,428	73,039	14.9	7.42	3.71
6	Bristol Twp.	57,129	57,625	16.0	8.01	4.01
7	Erie	108,718	107,977	18.7	6.93	3.47
8	Harrisburg	52,376	54,438	7.6	6.27	3.14
9	Lancaster	55,551	58,258	6.9	5.65	2.83
10	Lower Merion Twp.	58,003	58,558	23.9	8.12	4.06
11	Penn Hills Twp.	51,479	49,000	19.0	6.36	3.18
12	Philadelphia	1,585,577	1,498,971	128.5	22.97	11.49
13	Pittsburgh	369,879	354,490	55.1	12.75	6.38
14	Reading	78,380	78,086	9.6	4.66	2.33
15	Scranton	81,805	77,259	25.7	9.55	4.78
16	Upper Darby Twp.	81,177	80,430	7.8	4.94	2.47
					Avg. Diameter**	
Sub-totals		137,499	135,702	23.2	**9.00**	

Notes:

*** Diameter provided by PennDOT, Cartographic Information Division. Data Source: Intergraph Microstation Design Files. Boundary lines were digitized from existing General Highway Series County Maps (approximate scale: 1" = 1 mile)**

**** Sum of all calculated diameters divided by number of cities rounded up**

Dedicated, Point-to-Point Circuit Pricing Examples

Cost = (((Local Channel+Trans. Func.) x 2 end points) +fixed) + (mileage charges x number miles)

Bell Atlantic

Cell 1 (downtown Philadelphia and Pittsburgh)
Cell 2 (secondary CO: in PHLA - Chestnut Hill; in PTBH - Squirrel Hill)
Cell 3 (examples are Harrisburgh, Lancaster)
Cell 4 (examples are Bloomsburg, Berwick, Dubois)

	Fixed Charges			Mileage Charges						
	Local Channel	Fixed	Trans. Function	IOC Per Mile	Nr. of miles 1	Nr. of miles 5	Nr. of miles 11	Nr. of miles 19	Fixed Component	Variable Component
T1.5 (DS 1) Circuits: Pa PUC 500										
Cell 1 Monthly Charges	$210.00	$75.00	$0.00	$25.00	$520.00	$620.00	$770.00	$970.00	$495.00	$25.00
Cell 1 Annual Charges					$6,240.00	$7,440.00	$9,240.00	$11,640.00		
Cell 2 Monthly Charges	$225.00	$75.00	$0.00	$25.00	$550.00	$650.00	$800.00	$1,000.00	$525.00	$25.00
Cell 2 Annual Charges					$6,600.00	$7,800.00	$9,600.00	$12,000.00		
Cell 3 Monthly Charges	$240.00	$75.00	$0.00	$25.00	$580.00	$680.00	$830.00	$1,030.00	$555.00	$25.00
Cell 3 Annual Charges					$6,960.00	$8,160.00	$9,960.00	$12,360.00		
Cell 4 Monthly Charges	$270.00	$75.00	$0.00	$25.00	$640.00	$740.00	$890.00	$1,090.00	$615.00	$25.00
Cell 4 Annual Charges					$7,680.00	$8,880.00	$10,680.00	$13,080.00		
GTE										
T1.5 (DS 1) Circuits: Pa Intrastate										
DS1 Monthly Charges	$42.03	$0.00	$0.00	$38.75	$122.81	$277.81	$510.31	$820.31	$84.06	$38.75
DS1 Annual Charges					$1,473.72	$3,333.72	$6,123.72	$9,843.72		
United										
T1.5 (DS 1) Circuits: Pa Intrastate										
DS1 Monthly Charges	$215.00	$85.00	$0.00	$19.80	$534.80	$614.00	$732.80	$891.20	$515.00	$19.80
DS1 Annual Charges					$6,417.60	$7,368.00	$8,793.60	$10,694.40		
Commonwealth										
T1.5 (DS 1) Circuits: Pa Intrastate										
DS1 Monthly Charges	$270.00	$75.00	$0.00	$25.00	$640.00	$740.00	$890.00	$1,090.00	$615.00	$25.00
DS1 Annual Charges					$7,680.00	$8,880.00	$10,680.00	$13,080.00		

Dedicated, Point-to-Point Circuit Pricing Examples

Cost = (((Local Channel+Trans. Func.) x 2 end points) +fixed) + (mileage charges x number miles)

Bell Atlantic

Cell 1 (downtown Philadelphia and Pittsburgh)
Cell 2 (secondary CO: in PHLA - Chestnut Hill; in PTBH - Squirrel Hill)
Cell 3 (examples are Harrisburgh, Lancaster)
Cell 4 (examples are Bloomsburg, Berwick, Dubois)

	Fixed Charges			Mileage Charges					
	Local Channel	Fixed	Trans. Function	IOC Per Mile	Nr. of miles 1	Nr. of miles 5	Nr. of miles 11	Nr. of miles 19	Fixed Component	Variable Component
North Pittsburgh										
T1.5 (DS 1) Circuits: Pa Intrastate										
DS1 Monthly Charges	$270.00	$75.00	$0.00	$25.00	$640.00	$740.00	$890.00	$1,090.00	$615.00	$25.00
DS1 Annual Charges					$7,680.00	$8,880.00	$10,680.00	$13,080.00		
Palmerton										
T1.5 (DS 1) Circuits: Pa Intrastate										
DS1 Monthly Charges	$425.00	$0.00	$0.00	$55.00	$905.00	$1,125.00	$1,455.00	$1,895.00	$850.00	$55.00
DS1 Annual Charges					$10,860.00	$13,500.00	$17,460.00	$22,740.00		